



SEONGJUN JANG

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Education

2017 **KyungHee University**
~ 2021 B.Eng. in Industrial & Management Systems Engineering
 B.Eng. in Software Convergence (Convergence Leader Track)

- Scholarship : Full-tuition for full semesters (Admission Scholarship)
- GPA : 3.82 / 4.5

Study Abroad

- : Intensive Engineering Program – **The University of Auckland** in New Zealand (2020)
- : Short-Term Overseas Program – **UCSI University** in Malaysia (2017)

Research Interests

Specialized in **Optimization, Statistics, Data Science, Machine Learning**

Interested in **Music Information Retrieval**

Research Experience

Computer Vision Lab @ Korea University (MAR 2021 - JUN 2021)

Advisor : Prof. Sangpil Kim (Department of Artificial Intelligence, Korea Univ.)

Paper Experience

Data Augmentation Techniques for Effective Learning of Event-Based Data - 2020

- Link : (github.com/junnei/EST)
- Skills : Python, Pytorch
- Goal : Improving model performance with novel data augmentation techniques
- Details
 - Outperforms when applied to Yolo-v3(Image-like), Asyncnet(Event Histogram)

Demand Prediction and Location theory depending on the diffusion of Fuel-Cell Electric Vehicle and Hydrogen Station – 2019

- Link : (github.com/junnei/Paper_Hydro)
- Skills : Python, CPLEX, Tableau, React Native
- Goal : Predicting the diffusion of FCEV, finding the best locations for stations
- Details
 - Compare ours with government roadmaps
 - made navigation app for finding hydrogen station

Recently Project Experience

Future Signal Prediction of Dynamic Vision Sensor – 2021

- Skills : Python, Pytorch
- Goal : Prediction future signal of event-based camera(dynamic vision sensor)
- Details
 - Outperforms the SOTA model in Video Prediction : PhyDNet
 - Architecture - transformer-based model

Model Sparsity benefits with Data Sparsity – 2021

- Skills : Python, Pytorch
- Goal : Finding benefits of deep learning model sparsity when data is sparse.
- Details
 - Research transformer architecture

High Dynamic Range Object Detection Using Event-based Camera – 2020

- Link : (github.com/junnei/ECOD)
- Skills : Python, Pytorch
- Goal : Enables event-based data for object detection models
- Details
 - Convert sensor data to image to use object detection model : YOLOv3

Oulim : Web-based Remote Learning Platform – 2020

- Link : (oulim.pinkjelly.cat)
- Skills : JavaScript, React, Node.js
- Goal : Building a learning platform to help disabled people
- Details
 - Real-time voice recognition for subtitling system in class
 - Disability-friendly such as sign language translation and high contrast

Seemly : Psychological test-based matching chat service – 2020

- Link : (github.com/junnei/Seemly)
- Skills : Dart, Flutter, Firebase
- Goal : Enables event-based data for object detection models
- Details
 - Convert sensor data to image to use object detection model : YOLOv3

Harmony : Psychological test-based matching chat service – 2020

- Link : (github.com/junnei/harmony)
- Skills : Dart, Flutter, Firebase

Dyslexia Diagnostic App Service – 2020

- Skills : Python, Pytorch, JavaScript, React Native, NCloud API

Benefit-based integrated automatic payment service – 2019

- Link : (github.com/junnei/sol_app)
- Skills : JavaScript, React Native, Shinhan API
- Goal : Enables automatic payment with the most beneficial card
- Details
 - Get a **excellence prize** with Payment App in **Shinhan-Hackathon 2019**

Speech recognition model based seq2seq – 2019

- Skills : Python, Pytorch, NSML
- Temporarily first place in Naver AI Hackathon

SNS Service to share travel records – 2019

- Skills : React Native, JavaScript

web service for abandoned dog support – 2019

- Link : (mong.kr)
- Skills : AWS, Django, PostgreSQL

Black-and-white Picture Coloring model based U-Net – 2018

- Skills : Python, Tensorflow, Colab

Pre-order Service for Take-out – 2018

- Skills : React Native, mongoDB
- Goal : Enables self-employed people to provide pre-order service for take-out
- Details
 - First prize in KyungHee Startup Contest
 - Innovation award in Yongin Startup Contest
 - Start-up company receives 70 million won in support

Flight Ticket Reservation Service – 2018

- Skills : HTML, PHP, JavaScript, mysql

Folder and File Management System – 2018

- Skills : C++

Music Management and Playback Services – 2018

- Skills : C++

Auto-watered Flower Pot with Light for growth – 2018

- Skills : Maya, Arduino, Embedded C
- Details
 - First prize by track in Kyung-Hee Valley Program